Macro for Asia: The China Throughline

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ABSTRACT

Macroeconomics for Emerging East Asia develops a framework for analyzing macro stabilization policy in the Emerging East Asia context. My writing of the book was motivated in part by a desire to interpret China's exchange rate policy as other than "currency manipulation". China's exchange rate behavior in fact fits a regional pattern whereby central banks lean against excessive currency movement in the face of destabilizing forces. Exchange rate management is integral to monetary policy within an approach to macro stabilization that is attentive to both internal and external balance. To pursue balance in two dimensions simultaneously, fiscal policy is implemented in coordination with monetary policy. Whereas China has deftly directed its exchange rate policy toward countering cyclical disturbances to macroeconomic balance, its use of fiscal policy has for the last decade skewed consistently toward stimulus. The resulting public debt trajectory is unsustainable.

An approach to macroeconomic stabilization policy has taken hold in Emerging East Asia that is attentive to both internal and external balance, where internal balance involves growth at potential with inflation low and stable and external balance pertains to meeting a target position on the current account of the balance of payments. Under this approach, the exchange rate figures importantly as an instrument of macro policy. China is an adherent of the approach, and indeed provided the seed kernel of motivation for the writing of my textbook expositing it, *Macroeconomics for Emerging East Asia*¹ (hereafter "Macro for Asia").

The China throughline of Macro for Asia begins with the controversy over the country's exchange rate policy and the formulation of a way to think about it that is nowhere to be found in US macro texts. The central banks of Emerging East Asia generally lean against currency appreciation when pressure on the balance of payments skews positive and lean against excessive depreciation when pressure goes too far negative. To be in a position to intervene against depreciation, central banks must build up reserves as circumstances permit. China is shown to fit the mold in this behavior. The text places fiscal policy in counterpoint to monetary policy for pursuing balance in both internal and external dimensions simultaneously. The analysis highlights the limits imposed on fiscal stimulus by debt sustainability concerns. China is testing these limits as an outlier within the region for its high and rising ratio of debt to GDP.

This paper begins by discussing the China impetus for the text, then goes on to analyze the country's monetary and fiscal policies using the frameworks developed in it. The paper concludes by circling back to refute historical charges of currency manipulation but to warn of caution going forward as the fiscal arm of stabilization policy is depleted.

¹ Macroeconomics for Emerging East Asia, (Cambridge University Press, 2022). Author website: http://macroforasia.com.

The China Impetus

In the mid-2000-aughts, China came under heavy fire from the US for "currency manipulation". Critics pointed to China's current account surpluses and reserve accumulation as evidence of a deliberate policy to undervalue the renminbi for the purpose of gaining competitive advantage in exports. By 2007, as shown in Figure 1, China's current account surplus had ballooned to 9.9 percent of GDP and remained at 9.2 percent in 2008, to great outcry from the US. Yet by 2011, the surplus had fallen to 1.8 percent of GDP with modest renminbi appreciation relative to the US dollar of just 8.5 percent versus 2008. Through the next few years, the surplus fluctuated in the neighborhood of 2 percent of GDP before dropping below 1 percent in 2018 and 2019, by which point the renminbi was *down* 2.2 percent relative to the US dollar versus 2008.

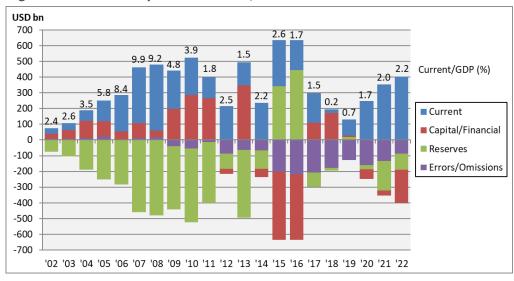


Figure 1. Balance of Payments Accounts, 2002-2022

Data sources: balance of payments, IMF <u>International Financial Statistics</u>; GDP, IMF <u>World Economic Outlook</u>.

Figure updated from Macro for Asia, Chart 5.1.

A story can be told of forces other than the exchange rate driving the gaping and waning of China's current account surplus. That story supports an argument that China managed its exchange rate effectively for medium-term stability through the buffeting visited upon its external balances. The story rests on domestic factors pushing the saving rate up to create excess saving relative to domestic investment resulting in a capital outflow duly funded by a trade surplus.² One factor behind the saving increase was the rising share of the income-producing working-age population against a shrinking share of the consuming young and elderly. The other factor behind the saving boom was China's extraordinarily rapid GDP growth which left consumption failing to keep up.

A rising saving rate is normal during growth takeoff, as Figure 2 illustrates. Taiwan saw its saving rate rise from 13.2 percent to 35.0 percent between 1962 and 1973 fueled by GDP growth averaging 10.1 percent a year.³ Singapore's saving rate went from 21.7 percent to 45.6 percent between 1971 and 1983 with GDP growth averaging 8.8 percent. For Korea, the saving rate rose

² Bonham, Carl and Calla Wiemer, 2013. "Chinese Saving Dynamics: The Impact of GDP Growth and the Dependent Share", Oxford Economic Papers, Volume 65, Issue 1.

³ Chapter 4 of Macro for Asia analyzes saving-investment behavior for the Taiwan case.

from 14.4 percent to 41.2 percent on GDP growth of 9.8 percent. Thailand, Malaysia, and Vietnam similarly experienced sharp increases in their saving rates in connection with rapid GDP growth.

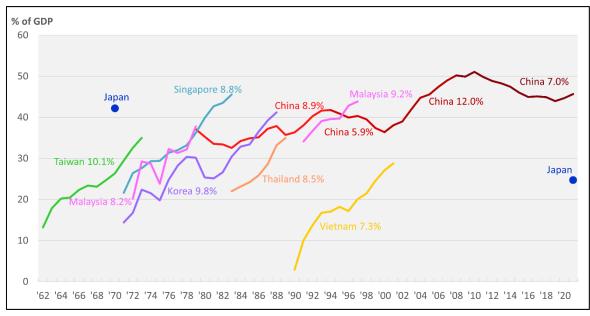


Figure 2. Saving Rate Run-Ups and Associated GDP Growth Rates

Data sources: World Bank World Development Indicators; China, Bonham and Wiemer (2013), op. cit.

Figure from Wiemer, Asia Economics Blog, 15 July 2020.

China stands out for having started its growth takeoff with an already high saving rate, which then went to an extreme.⁴ At the dawn of reform and opening in 1979, China's saving rate stood at 37.1 percent of GDP under a command economy oriented toward mobilizing an economic surplus for state investment purposes. Initial reforms that distributed income to households brought a decline in the saving rate, but it then turned back up as growth accelerated. By 1994, the saving rate had risen to 41.8 percent of GDP. The latter 1990s saw a slowing of growth as structural reforms brought dislocations. With time though, these reforms along with China's entry into the World Trade Organization fueled phenomenol growth in the 2000-aughts that propelled the saving rate to 50.2 percent by 2008. Beyond that, a cooling of growth eased the saving rate back down to 44.0 percent in 2019. The pandemic then brought other forces into play to push the saving rate back up.

The pattern is clear then: episodes of sensational growth bring with them a run-up in the saving rate. This results in a gap between saving and investment that is met with a gap between exports and imports. Ultimately, growth must slow and, with that, the saving rate stabilizes or declines whereupon balance is restored both domestically between saving and investment and externally between exports and imports. Of note, Japan was once a high saving country but as its growth stalled and its population aged, its saving rate settled to around the global mean of 25 percent of GDP.

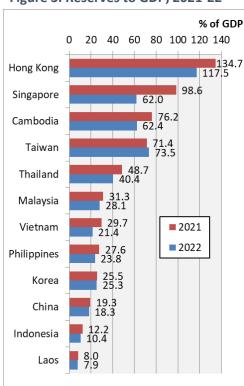
To fight the external imbalance with the exchange rate during a growth takeoff would inflict senseless harm. To be sure, appreciation of the domestic currency would crimp exports. That would in turn slow growth in income and employment. The consequence for imports is ambiguous between the inhibiting effect of slower growth and the purchasing power enhancement of a

⁴ The real GDP growth rates for China are derived by subtracting the inflation rate from the nominal GDP growth rate based on Bonham and Wiemer (2013), op. cit.

currency appreciation. Still, given appreciation of sufficient magnitude, the trade surplus could be eliminated. But this rests on the pain of dragging down economic growth to below its potential.

The alternative during the takeoff phase is to rely on foreign demand to support growth. This is achieved by the central bank leaning against currency appreciation, buying foreign exchange to keep exports competitive. China's central bank is seen in Figure 1 to have behaved in just this way, ramping up reserve outflows during the 2000-aught years of swelling trade surpluses. Such building of reserves during times of upward pressure on a currency provides a reservoir to draw down when at some point the currency may need defending. Over a span of 13 years from 2002 to 2014, China accumulated reserves totaling \$3.8 trillion. Then, in just two years, 2015 and 2016, it shed reserves of \$0.8 trillion. By 2015, between the renminbi appreciating against the dollar and the

Figure 3. Reserves to GDP, 2021-22



Data sources: reserves, IMF <u>International</u> <u>Financial Statistics</u>; GDP, IMF <u>World Economic</u> <u>Outlook</u>.

Figure updated from Macro for Asia, Chart 11.3

dollar appreciating against other currencies, the renminbi came to be perceived as having flipped to overvaluation. With that, speculative flight from the currency was on. Although China imposes controls on cross-border capital flows, legitimate ways of moving money out of the country exist, importantly in this instance through the paying down of foreign debt. Moreover, not so legitimate ways of moving money out cannot be entirely foreclosed as hinted by the sharp rise in outflows captured under net errors and omissions.

For the Chinese central bank to be credible in expending \$0.8 trillion to defend against currency depreciation, market participants had to believe it would not run out of fire power. Against a net outflow of reserves of this magnitude, a reserve stock of \$4 trillion does not seem excessive for exuding assurance. And indeed by 2017, markets had calmed and net capital flows again turned positive. Relative to the size of its economy, China holds reserves that are low by the standards of the region, as Figure 3 shows. In 2021 and 2022, China's reserves were under 20 percent of GDP. Among economies in Emerging East Asia, only Indonesia and Laos showed reserve-to-GDP ratios lower than China's while elsewhere in the region the figures have extended far higher.

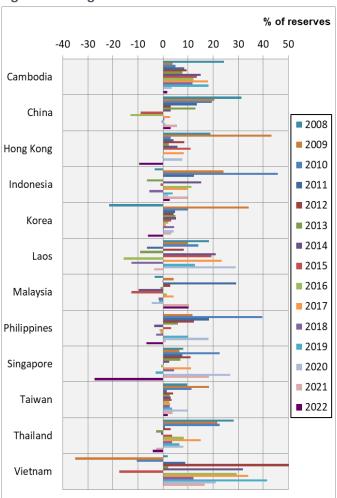
Monetary Policy

In the Emerging East Asia setting, foreign exchange market intervention is a key aspect of monetary policy. Central banks adjust the size of their balance sheets by intervening in the forex market, as alternatively they may do by intervening in the market for government securities. If the intervention is in the market for government securities, the direct effect is on the interest rate and that in turn induces foreign capital movements that influence the exchange rate. Whether acting through the foreign exchange market or the government securities market, the central bank manipulates the size of its balance sheet in the conduct of monetary policy. The more open and globally integrated are capital markets, the less latitude the central bank has for targeting a domestic rate of interest. Indeed, in the cases of Singapore and Hong Kong, the exchange rate

constitutes the only instrument of monetary policy, albeit actively managed in the former case and a fixed point in the latter.

Monetary policy, as articulated through the exchange rate, wields influence over balance in both external and internal dimensions. Tightening of monetary policy raises the value of the domestic currency to decrease the balance on the current account, and by switching expenditures to the global market restrains domestic growth relative to potential. Conversely, loosening of monetary policy reduces the value of the domestic currency to increase the balance on the current account, and by switching expenditures to the domestic market boosts growth relative to potential. As explained in the next section, fiscal policy works at cross-purposes so that any combination of stimulus and restraint across internal and external dimensions can be achieved. This two-dimensional balancing act, as developed in Macro for Asia (Chapter 13), is adapted from the Swan diagram.⁵

Figure 4: Change in Reserves



Note: Change in reserves is given by the reserve item on the balance of payments relative to the stock of reserves. Values for Laos and Vietnam are not available for 2022 at this writing.

 $\label{eq:Data Source: IMF International Financial Statistics.}$

Figure updated from Macro for Asia, Chart 11.4.

To steer a medium-term course of exchange rate stability with external balance, the central bank must be prepared to intervene on either side of the market, buying or selling foreign currency as needed. To be in a position to sell foreign currency, the central bank must first accumulate it. Building a stash of reserves requires running balance of payments surpluses. Surplus positions have in fact been the norm for most Emerging East Asian economies for most years over the last decade and a half, as shown in Figure 4. Negative positions have manifested more rarely, but in some of these cases loss of reserves has been large relative to the stock of reserves. For China, reserves were drawn down by around 10 percent in each of 2015 and 2016. Vietnam experienced losses above the 10 percent mark in 2009, 2010, and 2015; Korea did so in 2008; Laos in 2016 and 2018; and Malaysia in 2015 and nearly so in 2014. The accumulation of reserves under favorable circumstances serves as a hedge against the risk that a defense of the exchange rate might at some unfortuitous moment strain even a very large cache of funds.

Emerging East Asian central banks have adopted a systematic approach to

⁵ Swan, T.W., 1963. "Longer-Run Problems of the Balance of Payments", in H.W. Arndt and W.M. Corden, eds., *The Australian Economy: A Volume of Readings* (Melbourne: Cheshire Press), pp. 384-395.

reserve management in support of stabilization policy. In times of upward pressure on the domestic currency, they lean against appreciation by buying foreign exchange; in times of modest downward pressure they tend to lean into depreciation, still buying foreign exchange; and in times of stronger downward pressure, they lean against depreciation by selling foreign exchange.

This behavior is clearly manifest in Figure 5. The horizontal axis measures the change in the value of the local currency relative to the US dollar such that movement to the right captures depreciation in the local currency. The vertical axis measures reserve flows on the balance of payments relative to reserve stocks held by the central bank so that movement upward indicates the central bank is depressing the value of the local currency. Echoing Figure 4, most points in the scatter plot lie above the horizontal axis meaning that in most years for most economies, central banks have accumulated reserves, thereby either leaning against appreciation (upper left quadrant) or leaning into depreciation (upper right quadrant). The dearth of points in the lower left quadrant shows the rarity of central banks leaning into appreciation by selling foreign exchange when the value of the currency is rising. The most extreme outliers are found in the lower right quadrant which captures central banks defending currencies against depreciation.

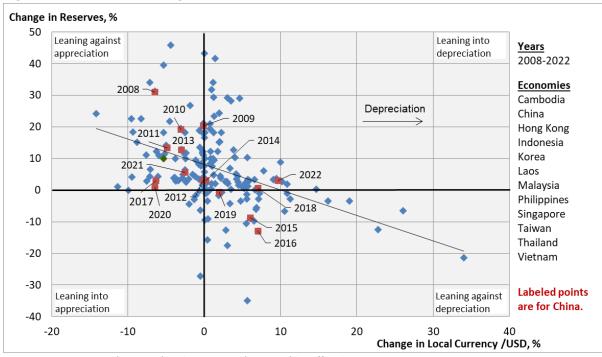


Figure 5. Reserves vs Exchange Rate, 2008-2022

Note: Vietnam, 2012 (0.0, 84.4) and Laos, 2022 (50.3, 0.0) lie off scale.

Data sources: IMF International Financial Statistics; Central Bank of the Republic of China (Taiwan).

Figure updated and adapted to China from Macro for Asia, Chart 15.4.

Data points for China lie within norms for the Emerging East Asia region. China's rates of accumulating and decumulating reserves have been roundly exceeded by neighboring economies. And its accedence to exchange rate fluctuation has not been notably constrained relative to neighbors.

The years 2015 and 2016 stand out for the Chinese central bank leaning hard against renminbi depreciation. These were years of heavy capital outflows, as discussed in connection with Figure 1. Conversely, the central bank leaned strongly in the opposite direction through 2008-2010

to keep the renminbi from appreciating. While in 2008 the pressure for currency appreciation derived mainly from a large trade surplus (as in earlier years), that surplus narrowed sharply through the years that followed while surging capital inflows took over to sustain overall surplus on the balance of payments. Global capital was drawn to the Chinese market as access was liberalized. The rationale for accumulating reserves against capital inflows is particularly compelling since capital inflows can later become outflows, as indeed occurred. By absorbing appreciation pressure during the inflow phase the central bank is prepared to moderate depreciation in any later outflow phase. Restraining depreciation is especially important to ward off panic selling that can cause a currency's value to plummet beyond reason with respect to market fundamentals. Overshooting occurs as depreciation impedes businesses from meeting foreign currency obligations and this then frightens foreign creditors from continuing to fund normal activity. China was able to avoid such sudden stop of capital inflows in 2015-2016 because the central bank, on the back of its large trove of reserves, was convincing in its defense of the renminbi.

After the steep depreciation of 2015-16, the renminbi rebounded in 2017. Since then, its value has fluctuated more widely than in previous years with less central bank intervention. When the pandemic hit in 2020, the renminbi appreciated by 6.5 percent with the central bank keeping to the sidelines. China weathered the initial outbreak of the pandemic well. Disease transmission was contained and exports were supported by strong external demand for China's manufactures. Against continued upward pressure on the currency in 2021, the central bank stepped in to contain further rise. Pressures flipped in 2022 as the US undertook aggressive monetary tightening and global capital was drawn to the dollar's higher returns. With this, China absorbed a 9.7 percent depreciation in the value of the renminbi. The greater flexibility of the exchange rate bears witness to the announced policy of the central bank to deepen market-based reform and restrain central bank intervention.⁶ The expressed intent is to rely more on interest rate targeting, yet the policy rate has nevertheless been bound within a very narrow band.

Fiscal Policy

For managing macro stabilization policy in both internal and external dimensions simultaneously, the fiscal arm of policy is brought to bear in tandem with the monetary arm. An expansionary fiscal policy boosts aggregate demand to increase growth relative to potential and induces expenditure switching to domestic sources to decrease the current account balance. A contractionary fiscal policy has the opposite effects of reducing growth relative to potential and increasing the current account balance.

Use of expansionary fiscal policy is constrained by the need to keep the ratio of public debt to GDP within prudent bounds. Official statistics show a debt-to-GDP ratio for China of 77.1 percent in 2022. This figure omits off-budget borrowing as well as contingent liabilities associated with state enterprises and financial institutions and the unfunded support costs of an ageing population. The threshold at which public indebtedness becomes problematic is not well-defined. Thus far, the Chinese government has had access to an ample supply of domestic credit at low interest rates that have kept its debt manageable.

⁶ Yi, Gang, 2023. "Remarks on China's Monetary Policy", Peterson Institute for International Economics. https://www.youtube.com/watch?v=VrkZP2niZ18 (accessed 26 July 2023). The current trajectory of the debt ratio is clearly not sustainable, however, as Figure 6 makes manifest. Through the early 2000-aughts, China's debt ratio was under 30 percent of GDP. Modest deficits were easily absorbed by high GDP growth rates to keep the ratio stable. In response to the Great Financial Crisis, the Chinese government ramped up spending, but so too did it increase revenue. The debt ratio notched up and then stabilized again at just over 30 percent. Then from 2012 onward the trajectory shifted as GDP growth slowed and the government deficit gaped open. Going into the pandemic, the debt ratio was already nearing 60 percent. When the pandemic hit, growth slowed, government revenue fell, and expenditures first rose then fluctuated as the ordeal stretched out.



Figure 6. Fiscal Position, 2002-2022

Data Source: IMF World Economic Outlook Database, April 2023.

Figure adapted to China from Macro for Asia, Chart 12.2.

The pandemic shocked government budgets on a worldwide basis. Revenues fell as the tax base took a hit while at the same time spending shot up to address the public health crisis and ensure business viability and household sustenance. With this, the debt sustainability calculus was upset far and wide. Such is the nature of fiscal policy during crises. Moving into recovery, discipline is required to return to a sustainable course.

Formally, the sustainability condition is defined by a government budget position that preserves a given debt-to-GDP ratio. That condition is met when the primary balance (the balance excluding interest payments on debt) is equal to the debt ratio (d) times the real interest rate on government borrowing minus the GDP growth rate (r-g) divided by one plus the growth rate (1+g). Thus, a higher interest rate reduces the allowable primary deficit and a higher growth rate increases it.

Sustainability analysis for the economies of Emerging East Asia is presented in Table 1. Over a forecast period of 2023-2027, China's real interest rate on government debt is projected at 0.7 percent, putting it at mid-range for the region. Its GDP growth rate shows at 4.3 percent, also midrange for the region. China stands out for having the highest debt ratio among neighbors at 77.1 percent of GDP, and, as noted, this understates the true picture for government liabilities. Coming out of the pandemic, all but two economies showed primary balances that exceeded the

sustainability threshold in 2022 or 2023, these two being Taiwan, which actually ran a primary surplus in 2022, and Vietnam, which benefits from a high growth rate and a low interest rate to create space for a relatively large deficit. Looking further ahead, all economies are projected to move back to a sustainable path by 2024-2027 except China and Hong Kong. For Hong Kong an increase in the debt ratio is of no concern given the low starting point of 4.3 percent of GDP. From China's starting point, however, a trajectory of continually rising debt cannot be taken lightly.

Table 1. Debt Sustainability

in %

	Interest Rate		GDP	Debt/GDP	Primary Balance/GDP			
	Nominal	Real	Growth					
		(r)	(g)	(d)	Sustainable	Actual	Projected	
	2023.05	2023-27	2023-27	2022	d(r-g)/(1+g)	2022	2023	2024-27
China	2.8	0.7	4.3	77.1	-2.7	-6.6	-5.8	-4.7
Hong Kong	3.1	0.7	3.0	4.3	-0.1	-10.2	-5.8	-1.2
Indonesia	6.6	3.8	5.0	39.9	-0.4	-0.4	-0.5	-0.1
Korea	3.3	1.2	2.2	54.3	-0.5	-1.2	-0.2	-0.2
Malaysia	3.8	1.2	4.3	66.3	-2.0	-3.2	-2.5	-1.8
Philippines	6.0	2.7	6.1	57.5	-1.9	-3.4	-2.2	-1.1
Taiwan	1.1	-0.1	2.4	27.5	-0.7	2.6	n/a	n/a
Thailand	2.4	0.4	3.3	60.5	-1.7	-4.4	-1.6	-1.5
Vietnam	3.1	-1.0	6.5	37.1	-2.6	-1.3	-2.3	-1.6

Data sources: nominal interest rate on 10-year government bonds, <u>World Government Bonds</u>; current and projected inflation, GDP growth, and primary balance/GDP: <u>IMF WEO</u>, <u>April 2023</u>; Taiwan primary balance/GDP: <u>Ministry of Finance</u>, <u>Republic of China (Taiwan)</u>, calculated as central government revenues – expenditures + expenditures on obligations.

Table updated from Macro for Asia, Table 15.1.

China's public debt was on an unsustainable course before the pandemic. Yet a crisis of such magnitude presses for a fiscal response. The negative economic consequences of not increasing government spending stand to be worse than those of adding to already high debt. Expenditures on public health measures to diagnose, treat, and contain the spread of the virus can mitigate the impact of the disease and hasten its suppression. Further, sustaining viable businesses and keeping the populace adequately fed and housed can reduce scarring to expedite recovery. Ideally, prudent fiscal management during normal times would ensure space to respond to negative shocks. For China to get to that place will take concerted effort to raise revenue and/or cut expenditures.

Stabilization Policy in Two Dimensions

To pursue stabilization policy in the two dimensions of internal and external balance, the monetary and fiscal arms of policy can be brought to bear in conjunction with one another. ⁷ Consider two examples. In Example 1, suppose GDP growth is below potential while the current account balance exceeds the target. A fiscal stimulus will address both imbalances simultaneously, boosting GDP growth and in the process inducing expenditure switching to domestic sources to decrease exports and increase imports. Had the current account surplus been viewed in isolation,

⁷ For a vivid elucidation of the various internal and external imbalance scenarios and prescribed policy responses, the reader is referred to the Swan diagram as laid out in Chapter 13 of Macro for Asia.

the advice might have been to bring about currency appreciation through central bank selling of foreign exchange for a monetary tightening. This policy intervention would indeed have the effect of decreasing exports and increasing imports. But it would also have the undesired consequence of slowing an economy that was already operating at below potential. The upshot is that policy design should be attentive to both internal and external imbalances.

In Example 2, suppose again that the current account balance exceeds a target but that GDP growth is at potential. In this case the instinct is for the central bank to intervene to raise the value of the local currency to induce expenditure switching to domestic sources. That will in fact have the desired effect of reducing exports and increasing imports. At the same time, however, the monetary tightening associated with the central bank buying local currency and selling dollars will slow economic growth. To offset this unwanted effect, a fiscal stimulus should be implemented in concurrence with the forex market intervention. The two policy arms are thus mobilized in tandem to achieve balance in one dimension while maintaining it in the other.

For policymakers to be in a position to choose at will among expansionary and contractionary monetary and fiscal policies, policy space is key. For fiscal policy, space has no bearing on tightening, which involves spending cuts and/or tax increases, although political factors will certainly weigh against such actions. Policy space is critical, though, when it comes to fiscal stimulus given the need for government to borrow in support of it. Fiscal space for borrowing is a legacy of the accumulated debt load, with the interest rate and GDP growth rate also factoring in as specified in Table 1.

For monetary policy, space is dictated by external forces to the degree that capital markets are open. The biggest external force constraining monetary policy in Emerging East Asia is monetary policy in the US. When the US raises interest rates to tighten, capital is drawn there from Emerging East Asia, depressing local currency values and thereby raising the local-currency cost of meeting dollar-denominated obligations. To counter this effect, the pressure is on to follow the US lead and tighten as well. Conversely, when the US lowers interest rates to loosen, capital flows out of the US to Emerging East Asia, raising local currency values and storing up potential for future flow reversals. Again, pressure is on to follow the US lead to keep interest rates aligned. The more open are capital markets, the less space there is for interest rates to diverge. China, under its state dominated business and financial system, imposes more barriers on capital flows than other economies in the region and is thus less exposed to US dictates on interest rates.

Space limitations further mean that stimulus policy must be confined to countering cyclical downturns as opposed to fighting long-term structural underperformance. Chronic failure of growth to reach potential cannot be perpetually overcome by fiscal and monetary stimulus. On the fiscal front, buildup of public debt becomes unsustainable, at some point undermining the government's creditworthiness such that interest rates rise to impose ever greater strain on the budget. On the monetary front, depressing the currency through reserve accumulation leads to an expanding trove of assets held at low return by the central bank. As the sustainability of such reserve building comes under doubt, speculative capital flows in, betting on currency appreciation to accentuate the distortion. Ultimately, the central bank will have to accede to the appreciation. A structural failure to achieve potential growth with balance in international payments will ultimately have to be corrected through reforms that motivate consumption and investment.

In the Chinese case, an unsustainable public debt trajectory has been in the offing for a decade (Figure 6). The underlying fiscal stimulus has boosted growth to a higher level than would otherwise have been achieved. Such long running reliance on fiscal stimulus has been possible due

to the availability of abundant saving that is readily channeled to funding the government. The combination of fiscal support and a rising propensity to consume – the consumption share in GDP going from 49.3 percent in 2010 to 55.8 percent in 2019 – kept China's current account balance at an average of 1.7 percent of GDP between 2011 and 2019, a magnitude that would make for a reasonable target given norms for the region. This external balance was achieved with little foreign exchange market intervention from 2017 onward following some prior years of two-sided intervention.

The combination of fiscal stimulus and market-based exchange rate policy that served to keep growth at potential and the current account at a desirable level (per Example 1 above) met with the pandemic shock in 2020. China led the world into lockdown, but as others followed suit China was for a time effective in containing the virus and its exports boomed to meet a surge in global demand for manufactures. In response, a hardy fiscal stimulus in 2020 was followed by retrenchment in 2021 as growth rebounded (Figure 6). A surging current account balance was initially met with renminbi appreciation in 2020, but by 2021 the central bank pushed back against further gains in the currency (Figures 1 and 5).

Shock took another form in 2022 as China was hit with capital outflows responding to aggressive interest rate increases by the US. The reminbi was allowed to give back its gains of the preceding two years with the central bank leaning slightly into the depreciation, and with that the current account balance edged up further. A positive fiscal impulse reinforced the monetary stimulus to counter the toll of lockdowns against a resurgent pandemic. Despite expansionary policy on both monetary and fiscal fronts, however, GDP growth reached only 3.0 percent even as the current account balance at 2.2 percent of GDP was higher than it had been since 2015. The remedy for a combined cyclical shortfall in GDP growth and excessive current account surplus would normally focus on fiscal stimulus. But against the toll of the pandemic and with fiscal space already binding, the potential for countercyclical policy was constrained.

Epilogue

Stabilization policy in Emerging East Asia is attentive to both internal and external balance. Pursuit of bi-dimensional balance involves implementing monetary and fiscal policy in concert. An analytical focus on the exchange rate as the instrument of monetary policy accommodates economies with fully open capital markets and thus no policy influence over the interest rate. The framework generalizes, nonetheless, to use of the interest rate as an instrument with effect transmitted to the exchange rate through capital flows.

The framing of exchange rate management as the basis for monetary policy is in pointed contrast to interpreting it as "currency manipulation". China has long been attacked as a "currency manipulator", with the US Treasury formally applying the designation in five years, 1992-1994, 2019, and 2020 – to the neglect of other years when China's current account surpluses were much larger (politics perhaps). Yet all the noise about "currency manipulation" notwithstanding, the International Monetary Fund has never formally charged China or any other country with the offense. This is because intent is critical to making the charge stick. "Currency manipulation" is defined in the IMF Articles of Agreement as acting with *intent* "to prevent effective balance of

payments adjustment or to gain an unfair competitive advantage against other members." If the intent is instead to carry out stabilization policy, currency manipulation does not pertain.

China's exchange rate management fits a broad pattern for the Emerging East Asia region, as captured by Figure 5. The Chinese central bank has leaned against renminbi appreciation in years of positive shock to the balance of payments, and more generally, at least in earlier times, undertaken modest reserve accumulation as a baseline. The resulting stockpile of reserves positioned the central bank to throw its weight against the shock of capital outflows in 2015-2016, restraining the renminbi's slide and restoring confidence. While China's reserve trough is large in absolute terms, it is modest relative to GDP by the standards of the region and proved of appropriate scale when tested.

While China fits the pattern for the region with respect to exchange rate policy, the country is pushing against norms of sustainability on fiscal policy. China's ratio of public debt to GDP has barreled upward over the past decade as the government has relied on fiscal stimulus to overcome shortfalls in GDP growth relative to potential that are structural rather than cyclical in nature. The growth model China relied on for some decades has run its course. That model has involved mobilizing a vast under-employed rural workforce, exploiting a global comparative advantage in low-skill manufacturing, and carrying out market-oriented reforms to improve economic incentives. The model of the future must rely on technological advance and productivity gains, entrepreneurship and innovation. Perpetual fiscal stimulus is not a viable alternative to implementing structural reforms.

For the internal/external approach to macroeconomic stabilization to work, both monetary and fiscal policy must be operational. If fiscal policy has maxed out at the limit of debt sustainability and the economy is still seen as underperforming, monetary stimulus may hold some appeal. But monetary stimulus — whether by the central bank depressing the value of the currency directly through purchase of foreign exchange or indirectly through expansion of the money supply via other means — will increase a current account deficit that as of 2022 was already at 2.2 percent of GDP. The goal of supporting domestic production can be achieved in this way, but only by relying on foreign rather than domestic demand. This strategy may work as a temporary stopgap if domestic demand is poised to recover from a cyclical shock, as was the case in the 2000-aughts. The strategy will run into international pushback, however, if there is no exit path.

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⁸ Articles of Agreement of the International Monetary Fund, p. 6. https://www.imf.org/external/pubs/ft/aa/index.htm